

### Tidings

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7. Of the items listed, select the three which have been collected as trash from the Lake: cigarette lighters, umbrellas, plastic bags, engines or bottles?

8. In which year was Oakland's first storm drain filter installed at Lake Merritt? 1995, 1998, 2001, 2004

9. Water quality in Lake Merritt can be defined by its oxygen, salinity, visibility, and bacteria levels. True or False? True or False?

#### Answers to questions in Fun Facts About Lake Merritt

1) True; 2) True; 3) True; 4) False, algae grows on widgeon grass and creates towers which billow up from the Lake bottom in the spring; 5) False, algae is a beneficial part of the food chain, but it becomes a nuisance when there is too much of it, causing odors and depleting oxygen levels when it decays; 6) True; 7) cigarette lighters, plastic bags, bottles; 8) 2001; 9) True.

# THE LAKE MERRITT INSTITUTE

AN URBAN RUNOFF AND  
WATERSHED RESEARCH CENTER

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TIDINGS  
FEBRUARY 2008



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## King Salmon Swims Home to Lake



Salmon jumping

By Kaletha Patterson

A 15-pound king salmon looking for a place to spawn apparently swam home to Lake Merritt after leaving these waters years ago.

Fifteen pounds may sound like a hefty weight for a fish, but this salmon was actually small in comparison to the average 25-30 pounders.

Contractor Matt O'Brien found the dead fish while working on the 18th Street pier reconstruction earlier this month. After observing an absence of seagulls flying around the fish, he determined the salmon had died, eventually sinking or blowing away in the wind.

O'Brien, who is also a fisherman, explained the salmon most likely derived from the Pacific Ocean, as they normally spawn this time of year.

"Salmon used to spawn in this area so it's nice to see that they're still around somewhat," O'Brien stated. He further explained why the salmon was found in the Lake. "Salmon always return back to the place where they were born. They have built-in GPS systems in their brains and they always go back to where they were hatched."

In this area, he said salmon are born in fresh water and swim to the ocean where they live for approximately three to four years until they fully develop. Upon maturing, they return to fresh water where they spawn and eventually die.

Many people may not be aware, but a number of dead fish can often be found in the Lake after severe periods of wet weather. According to O'Brien, it's not unusual to find large, dead fish because the County keeps flood control gates closed during high tides in order to prevent flooding from the rain. When large amounts of rain fall, especially for several days in a row, the bottom layer of water becomes very anoxic (the water has less oxygen in it) and it cannot support life.

Due to the 1989 Loma Prieta earthquake, the stairs at the 18th Street Pier have been inaccessible for the last 19 years. It has taken O'Brien, a contractor with the Valentine Corporation, and five other workers approximately six months to complete the repairs.

The project is expected to be completed and open to the public by May.

The 18th Street Pier is located at Lake Merritt at East 18th Street and Lakeshore Avenue.



Salmon spawning

The Lake Merritt Institute  
568 Bellevue Avenue  
Oakland, CA 94610



Volunteer Name  
Street Address  
City, ST ZIP Code

## A Lesson in Urban Runoff

By Lakshmi Rajagopalan

Urban runoff or 'storm drain pollution' is one of the main reasons for water pollution in Lake Merritt. When rain falls, it washes pollutants off the streets, parking lots, industrial and construction sites, and lawns. Urban runoff carries a mixture of pollutants from our cars and trucks, outdoor storage piles, muddy construction sites and pesticide residue.

Many problems caused by heavy rainfall are intensified when storm drains become filled with trash, or yard debris such as tree branches and leaves. This causes water to back up and flood roads, yards, businesses or homes. Efficient systems of ditches, gutters and storm sewers carry the untreated runoff to Lake Merritt and from there into the Bay. Recent winter storms, accompanied by high winds and heavy rain in Northern California, have brought in fresh trash from the storm drains.

There are 60 storm drains that flow directly into Lake Merritt, carrying trash from all over the watershed. With the help of Measure DD funds, storm drain filters have been installed near Grand Avenue, Staten and Bellevue Avenues, and the Rotary Nature Center. The filters trap trash smaller than cigarette butts and up to 80 percent of oil and grease mixed into rainwater and prevent it from going into the Lake.

The City of Oakland has a program called 'Adopt-A-Spot,' where city residents can volunteer to adopt a corner, street, median strip, play lot, storm drain, creek, or any small area of their choosing. Under the 'Maintain-A-Drain Campaign,' residents and merchants in Oakland can help prevent flooding by keeping a storm drain clean. The City will assist the volunteers by providing them with a set of rain gear, rakes, and debris bags and providing helpful information on drain cleaning and maintenance. Residents and volunteers near Lake Merritt have assisted City crews during the winter storms by maintaining the storm drains and alerting City crews to backed-up drains.



Urban Runoff

Staff at the City's Watershed Program will be instrumental in identifying pollutants. The Rotary Nature Center, with the help of staff from the City's Watershed Program, will also be conducting a class in summer to teach children to be pollutant detectors.

## Fun Facts About Lake Merritt

By Kaletha Patterson

1. Since December 1996 Lake Merritt Institute has been removing 1,000 to 6,000 pounds of trash from the Lake each month under a contract with the City of Oakland. True or False?
2. Floods can occur when runoff from rainstorms coincides with an incoming tide. True or False?
3. One-celled plants called plankton dominate the Lake during most of the year. They are the reason the water typically appears murky, green, brown and even almost red. True or False?
4. Seaweed growing on widgeon grass creates towers which billow up from the Lake bottom in the winter. True or False?
5. Algae is a wonderful element for water. True or False?
6. Dentures, a cell phone, a no littering sign, a safe, a television set, an armchair, a parking meter, clothing, a football trophy, a fire extinguisher, an assault rifle, drugs and a magic wand have all been found in urban runoff from the Lake. True or False?

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## The Monthly Bird Report

By Hilary Powers



A Great Blue Heron

### Cold but Splendid

The number of species viewed on the January Golden Gate Audubon trip jumped to 44, highlighted by a complete run of all the ducks in the genus *Aythya* that visit the western United States: both Greater and Lesser Scaup, Canvasbacks and one Redhead, and one each Ring-necked Duck and Tufted Duck – all at the Nature Center for the morning grain feed.

We also saw both Barrows and Common Goldeneyes beginning to pair off for the next season, and all 5 grebes that ever frequent the Lake, including an unusually close and leisurely look at a Horned Grebe (red-eyed powder-puff with a white neck and dark cap) swimming about 10 feet from the edge of the Lake and not diving as soon as someone pointed it out.

There were lots of Black-crowned Night Herons on the islands and more Great Blue Herons than I've ever seen there, but no Snowy Egrets at all.

Out by the fountain across Bellevue, we followed up on a report of a Red-breasted Sapsucker – a dramatic black and off-white bird with a red head and shoulders as well as the chest it's named for – and found it right where it had been earlier in the day. (If you do much birding, you'll know how



A Red-tailed Hawk

rare that is!) The same group of trees gave us a male Nuttall's Woodpecker with the reddest head I've ever seen, a full beret. . . . (Or was it a Nuttall's at all? Double-checking the field guide, that much red on the head is one of the field marks of the Ladder-backed Woodpecker, which we shouldn't have around here. Who knows? Mysteries of birding.)

In the garden, a young Red-tailed Hawk gave us the hairy eyeball from a pine branch about 20 feet off the ground – about as close a look as you can get. And so another good day – cold and threatening but not quite delivering rain – at the Lake, where any day is a good day.



A Male Common Goldeneye